

JSC Policy Directive

JPD 8820.2M

EFFECTIVE DATE: March 24, 2004

EXPIRATION DATE: March 24, 2009

| RESPONSIBLE OFFICE: JP/Planning and Integration Office

SUBJECT: Facility Construction, Rehabilitation, Modification, and Repair

1. POLICY.

It is JSC policy to consistently and expeditiously process the submission, review, and approval of facility work as prescribed below:

- a. Approval Levels. The approval level for facility work depends upon the type of project involved, the dollar value, and the funds to be used. (See Enclosure 2 and NASA Procedures Requirement 8820.2).
- b. Coordination. Coordinated reviews and interaction between JSC organizational elements are necessary during the development of proposed facility projects to assure that the limited resources are applied to the highest priority requirements. As part of the review process, due consideration will be given to alternative ways of meeting programmatic or institutional needs (i.e., the use of other facilities at JSC or elsewhere). In addition, the interrelationship of proposed projects and their effect on the current and future utilization of JSC facilities and conformance with the JSC Master Plan will be considered.

2. APPLICABILITY.

This directive applies to all Government-owned facilities under the jurisdiction of JSC. This includes the JSC Main Site; JSC Ellington Field (EF); Sonny Carter Training Facility (SCTF), the White Sands Test Facility (WSTF), NM; and the NASA site at Air Force Plant (AFP) 42, Palmdale, CA.

3. AUTHORITY.

- a. 42 U.S.C. 471 et. Seq. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.
- b. 14 CFR Part 1204, Administrative Authority and Policy.

4. REFERENCES.

- a. 40 U.S.C. 471 et. Seq., the Federal Property and Administrative Service Act of 1949, as amended.

- b. 14 CFR Section 1204.501, Delegation of Authority--to take actions in real estate and related matters.
- c. NASA Policy Directive (NPD) 8800.14, Policy for Real Property Management.
- d. NPD 8810.2, Master Planning for Real Property.
- e. NPD 8820.3, Facility Sustainable Design.
- f. NPD 8820.2, Design and Construction of Facilities.
- g. NPD 7330.1, Approval Authorities for Facility Projects.
- h. NASA Procedural Requirements (NPR) 8800.15, Real Estate Management Program Implementation Manual, Chapter 2: Acquisition of Real Property.
- i. NPR 8820.2, Facility Project Implementation Guide.
- j. JSC Policy Directive (JPD) 8820.3, Configuration Management (FCM) Program.
- k. JSC Policy Charter (JPC) 8820.4, JSC Facilities Review Board (FRB).

5. RESPONSIBILITIES.

- a. The JSC Director delegates facility project approval in accordance with NPD 7330.1 and NPR 8820.2.
- b. Pursuant to JPC 8820.4, the FRB provides senior management review and assessment of proposed facility projects and functions as a Facilities Utilization Review Board in accordance with NPD 8800.14, Policy for Real Property Management. The FRB Chairperson issues an Annual Call to JSC organizational elements for identification of proposed facility projects. The FRB Secretary receives facility project requests and assures review, approval/disapproval, and implementation as appropriate. The membership and specific functions of the FRB are set forth in JPC 8820.4.
- c. The Director, Center Operations (COD Director), has facility project approval authority per NPD 7330.1, Approval Authorities for Facility Projects, and is responsible for identifying, reviewing, and proposing to Center management facility work of an institutional nature. Such requirements are routinely developed and presented as part of this Directorate's responsibility for coordinating and administering the facilities programs of JSC. The COD Director also serves as Facilities Utilization Officer as required and described in NPD 8800.14.
- d. The Manager, White Sands Test Facility (WSTF), has facility project and work approval authority at the WSTF installation.
- e. The Center Staff Offices, Program/Project Offices, and other Directorates identify proposed facility work in response to the Annual Call or as the requirement is established during the year. Emphasis should be placed on identifying facility project requirements as far in advance as possible to permit timely inclusion in JSC and Agency planning and budgets.

- f. The Planning and Integration Office (PIO) administers the facility work programs of JSC including receiving, initiating, reviewing, and assessing requests; assuring management review and approval as required; and preparing and revising project documentation. The Chief, PIO, serves as FRB Secretary. The Director, Center Operations, delegates facility project approval authority in accordance with NPD 7330.1 of facility projects not to exceed \$500,000 to the Chief, Planning and Integration Office.
- g. The Facilities Management and Operations Division (FMOD) has the responsibility for providing preliminary engineering, final design, and facility project management; maintaining facility work records and as-built drawings for JSC; and providing facilities engineering and project requirements consultation for Construction of Facilities (CoF) level projects, MCRR projects and WAD's.

6. MEASUREMENT.

Construction, Rehabilitation, Modification, and Repair Work. Facility Projects fall into categories divided by cost and the funding source.

- a. **COF PROJECTS:** Projects that include new construction, rehabilitation, modification, and repair facility work exceeding \$500K in cost (excluding planning and design costs), and require final approval by NASA Headquarters (HQ) or Congress typically are to be included in the Center's annual fiscal year CoF Program submitted to Headquarters by the Center Director during the POP Call. Projects for WSTF are included in JSC's submission. The usual project categories are as follows:

The projects in the CoF budget are divided into categories of discrete projects, which are facility projects exceeding \$5M, and minor projects, which includes minor revitalization and construction projects exceeding \$500K but not over \$5M. The categories are further divided as follows:

- (1) Program Direct (PD) Projects - Construction projects required to conduct Human Space Flight (HSF) or Science, Aeronautics, and Technology (SAT) projects.
- (2) Institutional Projects are projects required for construction and facility revitalization (repair, rehabilitation, and modification) of the basic infrastructure.
- (3) Urgent, un-programmed requirements can only be accommodated in restricted cases. Functional managers are strongly reminded that requirements for facility construction, rehabilitation, modification, or repair should be identified well in advance (i.e., minimum of 3 years, optimum of 5 years prior to the year of needed construction) to permit the work to be included in the regular CoF Program submission and approval cycle. Urgent response for facility projects generally can only be accommodated via CoF projects in the following special cases:
 - (a) Unforeseen Programmatic requirements greater than \$500K construction, plus design, must be unanticipated, programmatically driven and funded, and unable to be deferred until the next CoF budget cycle.

(b) Emergency Repair Projects - Emergency repairs may be funded from CoF in accordance with Section 309(b) National Aeronautics and Space Act, as amended, and are defined as discrete work regardless of the cost. Emergency Repair requirements (CoF; in excess of \$500K construction, plus design) resulting from major breakdown, accident, natural disaster, etc., which could not be anticipated in normal operations and cannot be deferred until the next CoF budget cycle. Urgent, unforeseen requirements should be documented on JSC Form 608 or by letter and forwarded immediately to the PIO for action.

(4) At the NASA site at AFP 42, Palmdale, CA, all proposals or requests by the contractor for facility work estimated to cost in excess of \$50K shall be forwarded to the PIO for review, processing, and the gaining of required approvals. Since facility work in this cost range must be documented and administered as a facility project, construction shall not begin until the project is approved or until the COD Director provides specific authorization.

b. PROJECTS ESTIMATED TO COST BETWEEN \$200K AND \$499K - EXCLUDING PLANNING AND DESIGN COSTS CALLED MINOR CONSTRUCTION AND REPAIR (MCRR).

MCRR projects consist of Program Supported and Institutional funded facility work. At JSC Main Site, EF, SCTF, and WSTF all facility work in this range must be documented and administered as a facility MCRR project with appropriate NASA Forms (NF) 1509, Facility Project-Brief Project Document, and NF 1510, "Facility Project Cost Estimate." At JSC, requests for such work should be submitted to the FRB Secretary on JSC Form 608, "Facility Project Request," or on NASA Forms 1509, "Facility Project-Brief Project Document," and NF 1510, "Facility Project Cost Estimate," as soon as the requirement is established. The range of the project cost estimate, type of funding used, and level of approval authority determines project specific categories. At WSTF, MCRR projects are administered in accordance with procedures established and approved with the authority of the Manager, WSTF.

c. WORK AUTHORIZATION DOCUMENTS (WAD's) ESTIMATED TO COST \$200K OR LESS (EXCLUDING PLANNING AND DESIGN COSTS).

(1) JSC: At the JSC Main Site, SCTF, and EF locations, facility work estimated to cost \$200K or less is included in the WAD Program and is administered by the FMOD with the following requirements:

(a) A WAD, initiated by an authorized division-level requester, is to be submitted directly to the FMOD via the WAD database at http://www4.jsc.nasa.gov/scripts/org/ja/ja_carts/add.cfm as the need for work arises. A single delegation of this authorization to NASA personnel is permitted, provided that such delegation is authorized in writing by a division chief, with a copy of the delegation furnished to the FMOD. This delegation of authority may be extended to contractor personnel on a highly selective basis and will be approved only when requested at the directorate level. All such contractor delegations shall be in writing to the COD Director with copies furnished to the FMOD Chief and the Work Authorization Manager.

- (b) FMOD estimates the requested work, and the cognizant NASA JSC official responsible for the organization or the management of the contractor's contract/performance provides the required funding.
 - (c) All WAD's are reviewed for necessity, appropriateness, assignment of relative priority, verification of cost coding, and assurance that funds are available.
 - (d) All WAD's greater than \$50K must be submitted on a NF 1509. If the facility project is estimated to cost \$75K or more, a NF 1510 is required to accompany the NF 1509. These forms shall be submitted to the PIO required in NPR 8820.2.
- (2) WSTF: At WSTF, facility work estimated to cost \$200,000 or less is administered in accordance with procedures established and approved within the authority of the Manager, WSTF.
- (3) NASA site at AFP 42, Palmdale, CA: All proposals or requests by the contractor for facility work tasks estimated to cost \$25K or greater shall be forwarded to the PIO for review, processing, and the gaining of required approvals. Courtesy copies of documentation for all facility work tasks estimated to cost less than \$25K, whether permanent or sever able, shall be provided to the PIO.

7. RESCISSION.

JMI 8820.2L, June 7, 1991.

*Substantially rewritten; changes not annotated.

(Original signed by Jefferson D. Howell, Jr., 3/24/2004)

Jefferson D. Howell, Jr.

Director

2 Enclosures:

1. Definitions
2. Facility Project Appropriations Categories

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Enclosure 1 to JPD 8820.2M

Effective: March 24, 2004

DEFINITIONS

1. Facility - A term used to encompass land, buildings (facilities having the basic function to enclose usable space), other structures (facilities having the basic function of a research or operational activity), and other real property improvements, including utilities and collateral equipment. The term does not include operating materials, supplies, special tooling, special test equipment or setup, and no capitalized equipment. (See Financial Management Manual 9252-3 for criteria on capitalized equipment).
2. Facility Work - Facility construction, modification, rehabilitation, or repair normally required for the functional use of a building or other structure and which cannot be removed without cutting into the walls, ceilings, floors, structure or soil. Typical facility work examples include provision of primary utilities - water, sewer, and underground/overhead electrical power; site work such as facility-related foundations, sidewalks, roads, parking, and boundary fencing; erection, installation or assembly of new or replacement facilities; increases or decreases in area, volume, or both, to existing facilities; electrical system elements and installation upstream and including the operational panel board; water and sewer systems and fixtures; air conditioning and controls equipment and systems that serve spaces occupied by personnel; walls, as a minimum, that serves structural, safety egress, or security functions; hard or suspended ceiling systems including lighting fixtures; fire detection and suppression systems; OSHA-required safety provisions such as eyewash and shower stations that are hard-plumbed and/or floor-drained; security system elements other than removable cameras, sensors, control panels, and video equipment; non-maintenance facility installations, modifications or repairs required for environmental compliance reasons; replacement or significant change of collateral equipment; and other basic features that make the facility usable.
3. Facility Project - The consolidation of applicable specific individual types of facility work, including related collateral equipment, required to fully reflect all of the needs. Generally, they are related to one facility, which have been or may be generated by the same set of events or circumstances that are required to be accomplished at one time in order to provide for the planned initial operational use of the facility or a discrete portion thereof.
4. Construction - Alteration or repair (including dredging, excavating and painting) of buildings, structures, or other real property. For purposes of this definition, the terms buildings, structures, or other real property include but are not limited to improvements of all types such as bridges, dams, plants, highways, streets, tunnels, sewers, power lines, airport facilities, etc. Construction does not include the manufacture, production furnishing, construction, alteration, repair, processing or assembling of vessels, aircraft, and other kinds of personal property.
5. Rehabilitation and Modification - That facility work required to restore and enhance, alter, or adjust a facility or component thereof, including collateral equipment, to such a condition that it may be more effectively used for its presently designated purpose or so as to increase its functional capability. For simplification in facility project titles, work may be properly identified as "rehabilitation" provided the primary reason for accomplishment is that the basic restoration work must be done in any event; however, it is deemed prudent to accomplish any related enhancement, alteration, or adjustment work at the same time. If, on the other hand, the pressing requirement is for the alteration and adjustment work to achieve an increase in

functional capability, then this may be simply classified as "modification" even though restoration is also involved.

6. Repair - That facility work required to restore a facility or component thereof, including collateral equipment, to a condition substantially equivalent to its originally intended and designed capacity, efficiency, or capability. It includes the substantially equivalent replacement of utility systems and collateral equipment necessitated by incipient or actual breakdown.
7. Facilities Maintenance - The recurring day-to-day work required to preserve facilities (buildings, structures, grounds, utility systems, and collateral equipment) in such a condition that they may be used for their designated purpose over an intended service life. It includes the cost of labor, materials, and parts. Maintenance minimizes or corrects wear and tear and, thereby, forestalls major repairs. (Facilities maintenance work does not include work on non-collateral equipment).
8. Collateral Equipment - Encompasses building-type equipment, built-in equipment, and large, substantially affixed equipment/property and is normally acquired and installed as part of a facility project. Includes as follows:
 - a. Building-Type Equipment - That equipment which is normally required to make a facility useful and operable. It is built-in or affixed to the facility in such a manner that removal would impair the usefulness, safety, or environment of the facility. Such equipment includes elevators; heating, ventilating, and air conditioning systems; transformers; compressors; and other like items generally accepted as being an inherent part of a building or structure and essential to its utility. It also includes general building systems and sub-systems such as electrical, plumbing, pneumatic, fire protection, and their related control and monitoring systems.
 - b. Built-In or Large Substantially Affixed Equipment/Property - the unit of equipment or property of any type other than building type equipment which is built-in, affixed to, or installed in real property in such a manner that the installation cost including special foundations or unique utility services, or facility restoration work required after its removal, exceeds \$100K.
9. Non-Collateral Equipment - includes all equipment other than collateral equipment. Such equipment, when acquired and used in a facility or a test apparatus, can be severed and removed after erection or installation without substantial loss of value or damage thereto or to the premises where installed.

A unit of equipment may be considered non-collateral if it has such a close relationship to an Research and Development (R&D) project hardware item (i.e., prototype or test article, launch vehicle, spacecraft, etc.) that it is essentially an extension of the R&D hardware item in that its configuration and/or operating characteristics must constantly reflect unpredictable changes in the R&D item.

The relationship between the equipment item under consideration and the R&D item must be clear and significant; and, it must be evident that sufficiently frequent changes in the equipment item are definitely to be expected due to the nature or complexity of the R&D item although it may not be possible to predict the extent or actual frequency of such changes. This definition is provided to permit a more proper classification of equipment involved in the sensitive interfaces frequently found between an item of R&D hardware and an associated facility such as a test or a launch stand, wind tunnel, or other R&D technical facility. Each case, which involves substantially affixed equipment, will be specifically identified in the appropriate facility project documentation; and, the rationale will be provided to support the determination

that the equipment being categorized as non-collateral is so categorized in accordance with the application of this specific guidance.

10. Relocatable Buildings - Buildings or other enclosed structures used as working space, shelter, or to store equipment and other personal property, which are designed to be easily erected, dismantled, moved, and reused. Includes office/house trailers, prefabricated modular structures, tents, rigid and non-rigid inflatable structures, and similar structures unless excluded. Specifically excluded from this definition are built-in-place, pre-engineered metal buildings, wood frame buildings, and mobile equipment such as communications vans or trailers. Relocatable buildings may be purchased and used within NASA when these units constitute the most feasible and economical means of satisfying interim facility requirements. Facility work associated with the provision of utilities, site work, constructed foundations, etc., will be documented and approved in accordance with the provisions of this JPD.

Facility Project Categories and Approvals

Enclosure 2: Facility Project Appropriations Categories

Facility Project Approval Levels and Documentation Requirements \$ in K				
Facility Project Category	Center Approved		Congressional Approved Program Headquarters Project Approval	
	Non CoF (WO, MCRR, WAD)		Minor CoF	Discrete CoF (1), (3), (4) & (5)
	\$75	\$500	\$5,000	
Headquarters Documentation Required		Center Approved Form 1509 and Form 1510 if over \$75,000 (Copies to Headquarters, Code JX)	Forms 1509 and 1510 Required for Minor Projects	Long Form Write Up and Forms 1509 and 1510 Required for Discrete Projects NASA
	CENTER LOCAL DOCUMENTATION AND APPROVAL REQUIRED			
Maintenance Work Order	Included in COSS Contract. No approval needed.			
Maintenance Delivery Order	D.O. to perform IDIQ Maintenance and Repair work not included in COSS contract. (\$ Up to \$499K) Center Approval on DO: Funding Org. & FED			
WAD D.O.	D.O to perform new construction generated from WAD. (\$ Up to \$200K) Center Approval on DO/WAD: Funding Org. & FMOD			
MCRR (6)	D.O. or P.R. to perform new construction. (\$201K- \$499K) Center Approval on DO/Form 608: Division and Directorate Level Center Approval on Form 1509: COD Directorate			
Institutional CoF	Center Approval on Form 608: Division and Directorate Level Center Approval on Form 1509: PIO Office Center Approval on Form 1509: \$50K - \$200K – PIO Office			
Program Direct CoF	Center Approval on Form 608: Division, Directorate Approval, Program Approval Center Approval on Form 1509: COD Directorate and Program			
Land Acquisition (4)	See NPR 8800.15, <i>Real Estate Management Program Implementation Manual</i> for Documentation Required			

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| <ul style="list-style-type: none">(1) Emergency repair may be funded from CoF (Section 309(b), National Aeronautics and Space Act, as amended). Projects so funded are defined as discrete work at any cost.(2) Facility work (other than acquisition of Land) which may be required at locations other than NASA Centers or Component Facilities for the performance of program contracts may be accomplished under conditions specified in the current authorization Act.(3) Unforeseen major work may be accomplished by use of statutory reprogramming as provided in the current authorization Act. | <ul style="list-style-type: none">(4) Land acquisition at any cost, except when acquired for environmental compliance purposes, is defined as discrete work.(5) Discrete CoF projects are authorized by line item or by the authority stated in items 1 and 3 above.(6) Work is implemented through Delivery Order (approval by FED) for COSS contractor or Purchase Request for all other contractors. |
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